

The Listing of Claims:

1 (Currently Amended) A process for the preparation of a polypropylene polymer composition with bimodal rubber, said process comprising the steps of:

- i) feeding only propylene and a polymerization catalyst to at least one slurry reactor and producing a polypropylene polymer matrix in the presence of a polymerization catalyst in said at least one slurry reactor,
 - ii) transferring the slurry reactor product into a gas phase reactor (GPR),
 - iii) feeding a first mixture of ethylene and propylene to said first gas phase reactor and producing a first ethylene/propylene-copolymer in the polymer matrix in the presence of a polymerization catalyst in said first gas phase reactor,
 - iv) transferring the first gas phase reactor product into a second gas phase reactor,
 - v) feeding a second mixture of ethylene and propylene to said second gas phase reactor and producing a second ethylene/propylene-copolymer in the polymer matrix in the presence of a polymerization catalyst in said second gas phase reactor, and
 - vi) recovering the polymer product produced in step v) for further processing,
- wherein said first and second ethylene/propylene mixtures having different composition ratios
- wherein the composition ratios of said first and second ethylene/propylene mixtures are adjusted so that in the first gas phase reactor, a propylene rich ethylene propylene rubber (EPR) is produced in the propylene polymer matrix, and in the second gas phase reactor, an ethylene rich EPR rubber is produced in the propylene polymer matrix, whereby the polymerization conditions in the gas phase reactors are such that in the first GPR reactor A, the gas phase polymerization step is carried out by adding propylene and ethylene

monomers where the resulting amount of C_2 in the EPR formed in gas phase reactor A is in the range from 39-74 mol % and that in the other GPR reactor B, the gas phase polymerization step is carried out by adding propylene and ethylene monomers where the resulting amount of C_2 in the EPR formed in gas phase reactor B is in the range from 77-99.9 mol%, and wherein said polypropylene polymer composition has improved scratch resistance.

2-3 (Canceled)

4 (Previously Presented) The process of claim 1, whereby in GPR reactor A, the molar H_2/C_2 ratio is in the range between 0.01 to 0.1, and in GPR reactor B, the molar H_2/C_2 ratio is in the range between 0.3 to 0.7.

5 (Previously Presented) The process of claim 1, whereby the polymer products are flashed before transferring them to the next polymerization step.

6 (Canceled)

7 (Previously Presented) The process of claim 1, whereby the polymer product obtained in step vi is further treated for compounding with additives and/or fillers.

8 (Previously Presented) The polymer product obtained according to the process of claim 1.

9 (Previously Presented) The polymer product of claim 8, further comprising at least one additive or filler selected from minerals, slip agent and processing agents.

10 (Previously Presented) The polymer product obtained according to the process of claim 1 and having a dL value of less than 4.

11 (Currently Amended) A method for manufacturing molded articles comprising the step of molding a polymer obtained according to a process comprising the steps of

- i) feeding only propylene and a polymerization catalyst to at least one slurry reactor and producing a polypropylene polymer matrix in the presence of a polymerization catalyst in said at least one slurry reactor,
 - ii) transferring the slurry reactor product into a gas phase reactor (GPR),
 - iii) feeding a first mixture of ethylene and propylene to said first gas phase reactor and producing a first ethylene/propylene-copolymer in the polymer matrix in the presence of a polymerization catalyst in said first gas phase reactor,
 - iv) transferring the first gas phase reactor product into a second gas phase reactor,
 - v) feeding a second mixture of ethylene and propylene to said second gas phase reactor and producing a second ethylene/propylene-copolymer in the polymer matrix in the presence of a polymerization catalyst in said second gas phase reactor, and
 - vi) recovering the polymer product produced in step v) for further processing,
- wherein said first and second ethylene/propylene mixtures having different composition ratios

wherein the composition ratios of said first and second ethylene/propylene mixtures are adjusted so that in the first gas phase reactor, a propylene rich ethylene propylene rubber

(EPR) is produced in the propylene polymer matrix, and in the second gas phase reactor, an ethylene rich EPR rubber is produced in the propylene polymer matrix, whereby the polymerization conditions in the gas phase reactors are such that in the first GPR reactor A, the gas phase polymerization step is carried out by adding propylene and ethylene monomers where the resulting amount of C_2 in the EPR formed in gas phase reactor A is in the range from 39-74 mol % and that in the other GPR reactor B, the gas phase polymerization step is carried out by adding propylene and ethylene monomers where the resulting amount of C_2 in the EPR formed in gas phase reactor B is in the range from 77-99.9 mol%, and wherein said polypropylene polymer composition has improved scratch resistance.

12 (Previously Presented) A molded article comprising the polymer of claim 8.

13 (Previously Presented) The process of claim 1, wherein the resulting amount of C_2 in the EPR formed in gas phase reactor A is in the range from 53 – 65 mol%.

14 (Previously Presented) The process of claim 1, wherein the resulting amount of C_2 in the EPR formed in gas phase reactor B is in the range from 84 – 96 mol%.

15 (Previously Presented) The process of claim 1, whereby in GPR reactor A, the molar H_2/C_2 ratio is in the range between 0.03 to 0.06.

16 (Previously Presented) The process of claim 1, whereby in GPR reactor A, the molar H_2/C_2 ratio is 0.05.

17 (Previously Presented) The process of claim 1, whereby in GPR reactor B, the molar H_2/C_2 ratio is in the range between 0.4 to 0.6.

18 (Previously Presented) The process of claim 1, whereby in GPR reactor B, the molar H_2/C_2 ratio is 0.5.

19 (Previously Presented) The polymer product of claim 10 having a dL value of less than 2.

20 (Currently Amended) A method for manufacturing molded articles comprising the step of molding a polymer comprising at least one additive or filler selected from minerals, slip agent and processing agents, the polymer being obtained according to a process comprising the steps of

- i) feeding only propylene and a polymerization catalyst to at least one slurry reactor and producing a polypropylene polymer matrix in the presence of a polymerization catalyst in said at least one slurry reactor,
- ii) transferring the slurry reactor product into a gas phase reactor (GPR),
- iii) feeding a first mixture of ethylene and propylene to said first gas phase reactor and producing a first ethylene/propylene-copolymer in the polymer matrix in the presence of a polymerization catalyst in said first gas phase reactor,
- iv) transferring the first gas phase reactor product into a second gas phase reactor,

v) feeding a second mixture of ethylene and propylene to said second gas phase reactor and producing a second ethylene/propylene-copolymer in the polymer matrix in the presence of a polymerization catalyst in said second gas phase reactor, and

vi) recovering the polymer product produced in step v) for further processing,

wherein said first and second ethylene/propylene mixtures having different composition ratios

wherein the composition ratios of said first and second ethylene/propylene mixtures are adjusted so that in the first gas phase reactor, a propylene rich ethylene propylene rubber (EPR) is produced in the propylene polymer matrix, and in the second gas phase reactor, an ethylene rich EPR rubber is produced in the propylene polymer matrix, whereby the polymerization conditions in the gas phase reactors are such that in the first GPR reactor A, the gas phase polymerization step is carried out by adding propylene and ethylene monomers where the resulting amount of C_2 in the EPR formed in gas phase reactor A is in the range from 39-74 mol % and that in the other GPR reactor B, the gas phase polymerization step is carried out by adding propylene and ethylene monomers where the resulting amount of C_2 in the EPR formed in gas phase reactor B is in the range from 77-99.9 mol%, and wherein said polypropylene polymer composition has improved scratch resistance.

21 (Currently Amended) A method for manufacturing molded articles comprising the step of molding a polymer having a dL value of less than 4, the polymer being obtained according to a process comprising the steps of

i) feeding only propylene and a polymerization catalyst to at least one slurry reactor and producing a polypropylene polymer matrix in the presence of a polymerization catalyst in said at least one slurry reactor,

ii) transferring the slurry reactor product into a gas phase reactor (GPR),

iii) feeding a first mixture of ethylene and propylene to said first gas phase reactor and producing a first ethylene/propylene-copolymer in the polymer matrix in the presence of a polymerization catalyst in said first gas phase reactor,

iv) transferring the first gas phase reactor product into a second gas phase reactor,

v) feeding a second mixture of ethylene and propylene to said second gas phase reactor and producing a second ethylene/propylene-copolymer in the polymer matrix in the presence of a polymerization catalyst in said second gas phase reactor, and

vi) recovering the polymer product produced in step v) for further processing,

wherein said first and second ethylene/propylene mixtures having different composition ratios

wherein the composition ratios of said first and second ethylene/propylene mixtures are adjusted so that in the first gas phase reactor, a propylene rich ethylene propylene rubber (EPR) is produced in the propylene polymer matrix, and in the second gas phase reactor, an ethylene rich EPR rubber is produced in the propylene polymer matrix, whereby the polymerization conditions in the gas phase reactors are such that in the first GPR reactor A, the gas phase polymerization step is carried out by adding propylene and ethylene monomers where the resulting amount of C_2 in the EPR formed in gas phase reactor A is in the range from 39-74 mol % and that in the other GPR reactor B, the gas phase polymerization step is carried out by adding propylene and ethylene monomers where the resulting amount of C_2 in the EPR formed in gas phase reactor B is in the range from 77-

99.9 mol%, and wherein said polypropylene polymer composition has improved scratch resistance.

22 (Currently Amended) A method for manufacturing molded articles comprising the step of molding a polymer having a dL value of less than 2, the polymer being obtained according to a process comprising the steps of

- i) feeding only propylene and a polymerization catalyst to at least one slurry reactor and producing a polypropylene polymer matrix in the presence of a polymerization catalyst in said at least one slurry reactor,
 - ii) transferring the slurry reactor product into a gas phase reactor (GPR),
 - iii) feeding a first mixture of ethylene and propylene to said first gas phase reactor and producing a first ethylene/propylene-copolymer in the polymer matrix in the presence of a polymerization catalyst in said first gas phase reactor,
 - iv) transferring the first gas phase reactor product into a second gas phase reactor,
 - v) feeding a second mixture of ethylene and propylene to said second gas phase reactor and producing a second ethylene/propylene-copolymer in the polymer matrix in the presence of a polymerization catalyst in said second gas phase reactor, and
 - vi) recovering the polymer product produced in step v) for further processing,
- wherein said first and second ethylene/propylene mixtures having different composition ratios
- wherein the composition ratios of said first and second ethylene/propylene mixtures are adjusted so that in the first gas phase reactor, a propylene rich ethylene propylene rubber (EPR) is produced in the propylene polymer matrix, and in the second gas phase reactor, an ethylene rich EPR rubber is produced in the propylene polymer matrix, whereby the

polymerization conditions in the gas phase reactors are such that in the first GPR reactor A, the gas phase polymerization step is carried out by adding propylene and ethylene monomers where the resulting amount of C₂ in the EPR formed in gas phase reactor A is in the range from 39-74 mol % and that in the other GPR reactor B, the gas phase polymerization step is carried out by adding propylene and ethylene monomers where the resulting amount of C₂ in the EPR formed in gas phase reactor B is in the range from 77-99.9 mol%, and wherein said polypropylene polymer composition has improved scratch resistance.

23 (Previously Presented) A molded article comprising the polymer of claim 9.

24 (Previously Presented) A molded article comprising the polymer of claim 10.

25 (Previously Presented) A molded article comprising the polymer of claim 19.